

Exploiting the potential of Biotrade in Peru for a transition to a Green Economy

Preliminary Report
Prepared by: Yovita Ivanova
on behalf of ProNaturaleza
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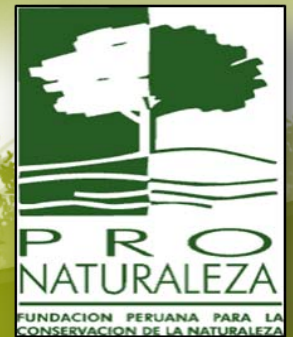


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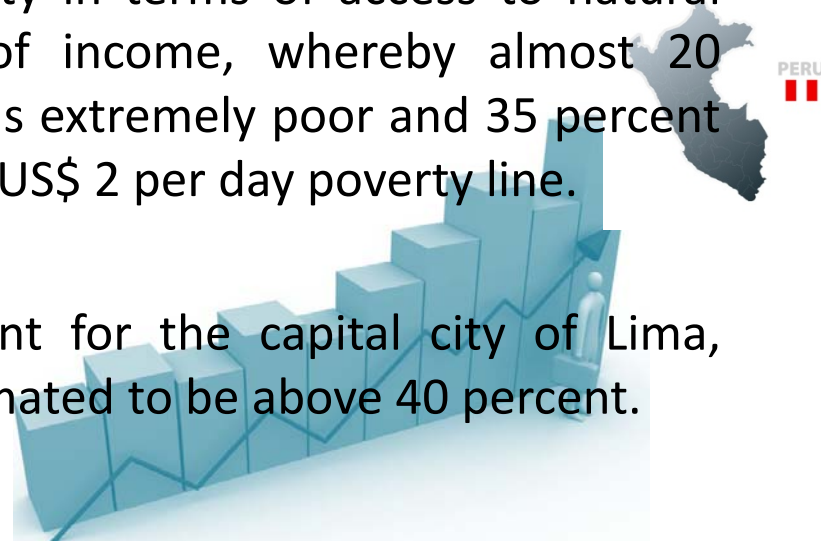
Peru at Glance

Stable macroeconomic environment

- Peru's economy has experienced an unprecedented period of growth, sustained for over 100 months making it the country with the best economic performance in Latin America!
- High commodity prices and increased internal consumption contributed to a record GDP of over US\$ 153.549 billion, during 2010. (GDP growth - 8%)
- More than US\$ 7.6 billion of foreign direct investment (FDI) for 2010. Exports have climbed by 31.1 percent in 2010, to a record of US\$ 35.4 billion and non-traditional exports, to which biotrade belongs, have reached a 30.5 percent increase compare to 2009.
- Non-traditional products export, part of which is biotrade, have reached US\$ 7.6 billion in 2010. (MINCETUR).
- Projected economic growth for 2011 is 6%.

Strong performance, but poverty still a big burden...

- The GDP per capita has risen from US\$ 4500 in 2007 to US\$ 5680 in 2010.
- The percentage of people living under poverty remains high and represents a major burden for the transition of the country to more stable economy.
- There is still a major gap in the society in terms of access to natural resources and unequal distribution of income, whereby almost 20 percent of the population is classified as extremely poor and 35 percent of the rural population lives based on a US\$ 2 per day poverty line.
- The unemployment rate is 8.0 percent for the capital city of Lima, whereas the figure in rural areas is estimated to be above 40 percent.



Peruvian ecosystems and biodiversity

- Peru is considered one of the most biodiverse countries in the world. It has 84 of the 104 existing ecosystems of the planet. Peru is home of over 5.500 plant species that are endemic for the country with 42 different known applications.
- Peru is home of over 5.500 plant species that are endemic for the country with 42 different known applications. It occupies the first place considering the variety of potato, aji, corn, Andean grains, some roots and tubers that are considered staple food to the majority of the world population.
- Peru ranks second in Latin America and fourth in world's forest coverage. It has 13 percent of the tropical Amazon forest with almost 72 mill. of hectares (ha) that offer wood but also many non-timber products like nuts, fruits, fungi and medicinal herbs.



Success stories...

Over the past decade, products such as tara (*Caesalpinia spinosa*), kiwicha (*Amaranthus caudatus*) and cochineal (*Dactylopius coccus*) have become the trademarks of the sector, adding new hectares and jobs. Only in the region of Arequipa, between 2005 and 2008, the hectares planted for kiwicha quadrupled, from 150 to 578 hectares. In less than 10 years, Arequipa has also planted more than 400 hectares of tara, creating new jobs for locals and generating income to many families. Arequipa represents also almost 80 percent of the total cochineal market worldwide, with 4400 hectares planted.

Tara fields in the desert of Lambayeque



Cochineal fields in Arequipa



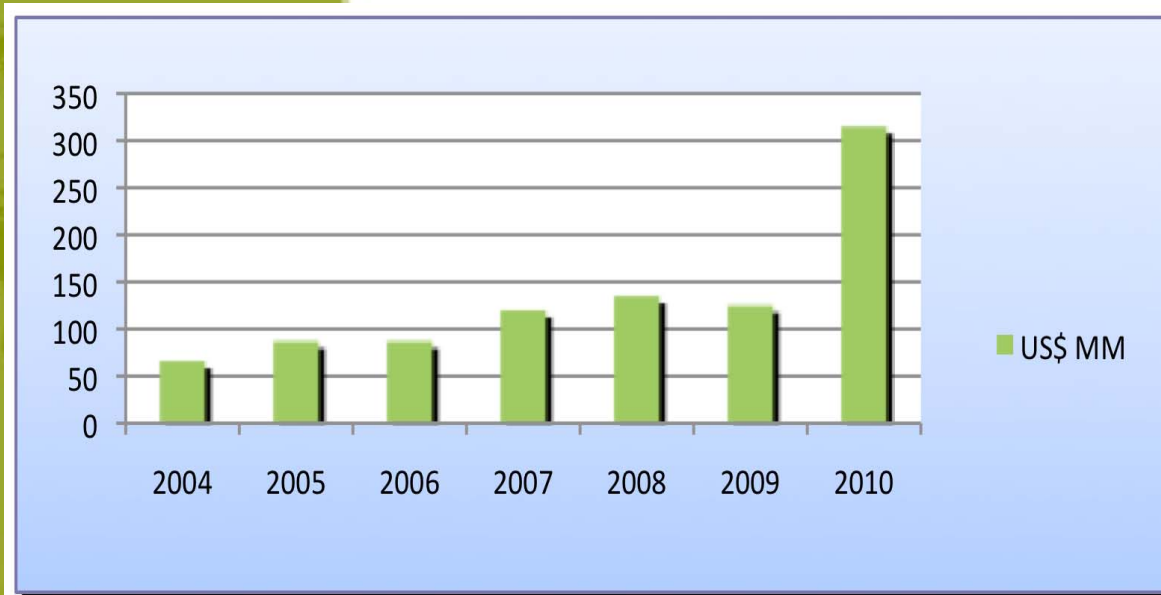
Kiwicha fields in the Andes



Impressive growth of the biotrade sector as well ...

Exports of native-biodiversity-based products have reached US\$ 318 million that represents almost 1 percent of country's exports for 2010.

Table: Peru's total native-biodiversity exports (in million US\$, FOB), 2004-2010



Almost 95 percent of all the biotrade production is exported and that has a steady growth of 20 percent per annum.

Biodiversity resources versus poverty rate

- In social terms, Peru's Andean region, which has the highest poverty rate, has some of the most important biodiversity-based resources. Huancavelica, a region with the highest poverty rate of 77.9 percent in Peru, has an opportunity to reduce this alarming rate because of its rich base in biodiversity resources, such as kiwicha, quinoa and tara that have a high international market demand.
- On the other hand, the region of Madre de Dios, also very rich in natural resources has a poverty rate of only 12.2 percent. Almost 30 percent of all the families in Madre de Dios have a direct or indirect work activity related to the production, transformation and commercialization of products and services (mostly ecotourism) related to the biodiversity.

Peruvian Ecosystems and Biodiversity

Regions	Main new biodiversity-based resources
Huancavelica	Kiwicha (<i>Amaranthus caudatus</i>), Lucuma (<i>Pouteria lucuma</i>), Quinoa (<i>Chenopodium quinoa</i>), Ratania (<i>Krameria triandra</i>), Tara (<i>Caesalpinia spinosa</i>)
Apurimac	Pasuchaca (<i>Geranium dielsianum knuth</i>), Ratania, Sauco (<i>Sambucus peruviana</i>), Tara, Yacon (<i>Smallanthus sonchifolius</i>)
Ayacucho	Cochineal (<i>Dactylopius coccus</i>), Aguaymanto (<i>Physalis peruviana</i>), hercampuri (<i>Gentianella alborosea</i>), Kiwicha, Lucuma, Molle (<i>Schinus molle L.</i>), Ratania, Tara
Puno	Hercampuri, Muña (<i>Satureja odora</i>), Quinoa, Ratania, Sangre de Drago (<i>Croton draconoides</i>), Yacon
Huánuco	Chancapiedra (<i>Phyllanthus niruri L</i>), Chuchuhuasi (<i>Maytenus macrocarpa</i>), Molle, Muña, Ratania, Sacha inchi (<i>Plukenetia volubilis</i>), Sangre de Drago, Sauco, Tara, Yacon, Caoba (<i>Swietenia macrophylla</i>), Tornillo (<i>Cedrelinga cateniformis</i>)

Biodiversity as contributor to the economy

- But ecosystems and biodiversity are not just ecological concepts. According to MINAM, biodiversity represents 22 percent of the country's GDP and 24 percent of its total exports. It is a major contributor for various industries such as:
- **Agriculture** - approximately 65 percent of the national agriculture depends on native biodiversity resources and as a fact, Peru is exporting ca. US\$ 9 billion of biodiversity-related products and services. In Peru, 4400 species of native plants have 48 different way of usage (food, medicine, fiber, timber, natural dyers, etc.) and the economic value that they represent is 10 percent of the GDP (approx. US\$ 4).
- **Tourism** - 71 percent of all the tourists that visited Peru have performed activities related to nature, such as trekking, rain forest excursions and visits to its numerous national parks, mainly in the region of Loreto, Madre de Dios and Cusco. Ecotourism is one of the fastest growing industries in Peru, representing US\$ 2 billion per year.
- **Pharmaceutical** - Peruvian medicine plants represent the active ingredient of various pharmaceutical products that annual sales are est. US\$ 400 billion.

2. The economy of biotrade

- The main trends in natural food and cosmetic markets point towards new and ethnic flavors and smells offering an important market-driven incentive for Peruvian products such as lucuma, aguaymanto, yacon, camu-camu, and Andean grains.
- Products rich in omega 3 oils such as sacha inchi experiences a growing demand.
- The pharmaceutical industry is also in a constant search of new drugs that combine traditional and modern knowledge and presents a potential for products based on camu camu, cat's claw, maca, and purple corn.
- Detox products, such as manayupa, and other products, such as purple corn, which is one of the most powerful antioxidants in the world, might have a huge international market.

3. Main Sector's Economic Barriers

- Limited state resources
- Difficult access to financing
- Scarce investment in new research and development (R&D)
- Insufficient capacity building and training for the sector
- Non-tariff trade barriers (NFR, GRAS)

4. Projections Biotrade Peru - 2020

Annual average growth between 2005 and 2010: **20%**

If proper measures are taken, we believe that the growth rate should double, reaching **40%** growth

Annual biotrade sales: US\$ 2.700 MILLION

Job creation: 250.000 ADDITIONAL JOBS

Additional hectares (cultivated species): 2.8 MILLION

Revenue of carbon trading on biotrade wild harvested species: US\$ 370 MILLION

Percentage of the total country's exports: 1.8 PERCENT



5. Public Policy Recommendations

- Strengthen the institutional coordination framework between the Ministry of Economy and Finance and the National Biotech Commission.
- Increase public funding of the sector through budget surge for government institutions related to the sector and provide access to State investment programs for provision of public goods and services.
- Improve the current biotech business environment through introducing government economic and fiscal incentives for foreign and local companies. Increase the public awareness and take the necessary measures to reduce the sector's risk perception among commercial banks and other financial entities.

5. Public Policy Recommendations

- Enhance production and productivity through investment in R&D activities prioritizing the development of value-added product's development.
- Expand the financial resources for capacity building and training of public and private sectors providing them with the adequate guidelines for better collaboration, expertise in the promotion of good environmental and social practice, practical, demand-driven support for the development of capacity for integrating biotrade business into the global natural products markets.
- Place more awareness of non-tariff trade barriers hindering the export of biotrade products and designate und for overcoming them.

Key findings

- Biotrade contributes to the economic growth of the country and has a positive impact on the economy, as well as social and environmental impact.
- Job creation and reduction of poverty through biotrade is happening in various regions.
- Poorer areas of Peru could take advantage of their rich natural resources to combat poverty.
- Environment: Biotrade can be a strong force to combat illegal deforestation, mining and substitute the coca plantations that are used to produce cocaine.
- Enterprises have many goals, but one of the strongest ideas is that they want to preserve the unique natural heritage for generations to come.

Key Findings

- Peru has the potential to be a leader and pioneer in the transition to the Green Economy model. The country has a unique product offering and rich natural heritage.
- Enterprises do feel that they operate on their own. Their success is largely attributed to their own effort.
- As long as access to finance is limited, it will be difficult to develop an industry that requires large investments in capacity building activities, promotion and R&D.
- Biotrade is still not mainstreamed in the political agenda. The government has to be a major promoter and front-runner in the further growth of the sector. More investment and funding is needed to contribute to this.

Required steps

All stakeholders have agreed that there are necessary steps that need to be taken in order to guarantee the success of the industry as such.

Clear action plan, with clear goals, control mechanisms, activities and objectives.

- I. It will be important to define what action plan with clear goals and milestones that need to be achieved, with strict control mechanisms and objectives.
- II. In order to save time and have a better starting point and establish a base that helps to set up the right conditions and environment from which we can build up our foundations
- III. Guidelines from key international stakeholders (UNEP, UNCTAD) on how to build this base

Required steps

- Define a time frame to analyze in depth the current situation, provide tools for the stakeholders and monitor the progress and achievements
- I. Prepare agenda which states each phase and its length has to be set up - know-how and input. Phases should include in-depth analysis, studies of current models worldwide, definition of goals, responsibility and task sharing.
 - II. Elaboration of a set of tools and concrete instruments that will help monitor the progress, correct missteps and provide feedback on achieving certain milestones.
 - III. A strengthened interinstitutional coordination between the National Biotrade Commission (NBC) and the Ministry of Economy is required, encouraging the possible participation of MEF as a full NBC member.

Closing Remarks

- The Peruvian biotrade community has expressed their strong optimism regarding the possible developments over the next decade, as long as there is a more active participation of the government and the financial institutions.
- Roles and responsibilities have to be very well defined in programs and clear goals have to be stated.
- The decision-making process requires a clear agenda and efforts have to be taken to shorten the extensive timelines in order to accelerate the process.

Thank you



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Yovita ivanova
yovitaivanova@yahoo.com